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8-19-04

This application claims the benefit of provisional applications 60/416771, filed Oct. 8, 2002 and 60/416926, filed Oct. 9, 2002.

TIRE PRESSURE SENSOR

BACKGROUND

Previously, the inflation of a tire required an inner tube. Presently, a single wall design is used on a majority of the automobiles on the market. Proper inflation of the single wall tire is essential to maintaining proper functioning of a vehicle. Driving a car with tire air pressure above or below the recommended level increases fuel consumption and tire wear. There are several risk factors. One is the temperature rise due to increased friction in the underinflated tire that may cause the tire to disintegrate. Another is reduced sheer force strength that may cause tire delamination failure where the tire comes off the wheel during a sharp turn. The third risk factor is poor vehicle handling from uneven tire air pressure.

Previous monitoring devices presented tire pressure indicators solving some of the inflation monitoring problems. The earlier tire pressure indicators simply mounted mechanical air pressure gauges to the stem of the tire inflation valve. Later, audible warning tones were incorporated US Patent No. 5,535,623 to Heyns shows a tire pressure indicator. Low pressure allowed a user to hear air escaping in a test mode. Tire pressure detecting and warning apparatus in US Patent No. 6,100,798 to Liang shows a tire pressure warning apparatus where reeds or radio transmitting device allows a warning by sound or lamps that the pressure is too high or too low.

Unfortunately, many of these devices requiring inflation suffer air leakage between the stem and the instruments in the cap device. Also, they can be easily stolen if the vehicle is parked unattended.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a side sectional view of the cap attached to the valve stem.

Figure 2 is a side sectional view of the cap removed from the valve stem.

Figure 3 is a perspective view of the invention.

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